

ABSTRACT

Sintered pieces of rapid-solidified aluminum alloy powder are friction stir welded together. The sintered piece may be composite material dispersing ceramic particle therein. A welding aid, which disperses the same ceramic particle as those in the sintered pieces, may be sandwiched between
5 or mounted on the sintered pieces. A weld zone is formed without melting, so as to inhibit formation of blowholes or coarsening of metallographic structure. Consequently, the sintered pieces are welded together while retaining intrinsic properties of the sintered aluminum alloy.